

Environmental Quality Branch Strategic Plan

State of Connecticut
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Commissioner



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**Connecticut Department of Environmental Protection
Environmental Quality Branch Strategic Plan
Fiscal Years 2002 - 2007**

AGENCY MISSION

To conserve, improve and protect the natural resources and environment of the State of Connecticut; to control air, land and water pollution in order to protect the health, safety and welfare of the people of Connecticut; and to preserve and enhance the quality of life for present and future generations.

BRIEF DESCRIPTION OF AGENCY

The Department of Environmental Protection (DEP) achieves its mission through regulation, monitoring, inspection, enforcement and licensing procedures that help control air, land and water pollution in order to protect health, safety and welfare. DEP also improves and coordinates the state's environmental plans, functions and educational programs in cooperation with federal, regional and local governments, other public and private organizations and concerned individuals, while managing and protecting the flora and fauna for compatible uses by the citizens. DEP is organized into the central office and two branches.

The Central Office provides administrative management, staff assistance, and ancillary services to aid the Commissioner, the Deputy Commissioner of Environmental Quality and the Deputy Commissioner of Environmental Conservation in their efforts to carry out the agency mission. Major programs are in the Office of Commissioner and the Bureau of Financial and Support Services.

The Branch of Environmental Conservation professionally manages forested and open lands, wildlife, marine and freshwater fisheries, and extensive recreation areas. Major programs are in the Bureau of Natural Resources and the Bureau of Outdoor Recreation. The Branch of Environmental Quality abates air, water and land pollution through the professional management of these resources. Major programs are in the Bureau of Air Management, the Bureau of Water Management and the Bureau of Waste Management.

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Connecticut Department of Environmental Protection Environmental Quality Branch Strategic Plan Fiscal Years 2002-2007

Introduction

The Environmental Quality (EQ) Branch of the Department of Environmental Protection (DEP) is comprised of the Bureaus of Air, Waste and Water Management and the Office of Enforcement Policy and Coordination while the efforts of the Office of Long Island Sound Programs are closely coordinated with the EQ Branch. The EQ Branch serves and is served by the Environmental Conservation Branch of the DEP with its fisheries, wildlife, natural resources, outdoor recreation and open lands programs and by the Central Office with its ombudsmen, assistance, environmental equity, information resources management, communications and education, and adjudication offices as well as its financial, human resource and administrative offices or programs. As demonstrated by the ecosystems within which DEP operates, its programs are all connected as must be its efforts toward environmental protection.

Recognizing that the environmental challenges of the 21st century will require more sophisticated problem solving solutions and that natural resources and fiscal resources are finite, it is clear that DEP's resources must be systematically managed to protect and enhance Connecticut's environment. Therefore the EQ Branch is engaging in a comprehensive branch-wide strategic planning process. As part of this strategic planning process the EQ Branch has identified nine Strategic Priorities that it will pursue. The Strategic Priorities are defined beyond the media-specific programs and functions and prescriptive grant requirements of past strategies. These Strategic Priorities will focus and coordinate efforts to accomplish objectives identified by environmental and natural resource management needs. The nine EQ Branch Strategic Priorities are: Air Quality Management; Watershed Management; Long Island Sound; Conservation and Development Planning and Management; Management of Toxic Pollutants; Materials Management; Emergency Response; Managing Environmental Compliance; and Promoting Environmental Stewardship.

The EQ Branch Strategic Priorities fall into two broad categories: 1) substantive issues and 2) procedural issues. The priorities are interrelated both across and within both categories – much as the environment itself. In general, the substantive efforts will continue to focus on achieving clean air, clean water, clean lands and protection and enhancement of natural resources and habitats. The procedural issues will address how DEP conducts its business and will assist in identifying the tools used to achieve the substantive issues. Permitting and enforcement will continue to be the backbone of DEP's procedural efforts. The difference is that DEP is formally recognizing that air, land and water are connected and require an integrated approach to problem solving. By viewing its priorities as interrelated, DEP opens the door to interposing its staff and financial resources across organizational lines toward operative priority goals that will guide its day-to-day operations.

Finally it is important to note that in addition to the EQ Branch Strategic Priorities DEP has certain umbrella priorities that apply to the entire DEP. While these umbrella priorities may not be specifically listed in the EQ Branch Strategic Priorities they are imbued within all of the EQ Branch programs. Among these DEP umbrella priorities are: Environmental Equity through which DEP promises and ensures that all members of the public are entitled to and receive the highest levels of environmental protection and access to all of the states resources; the Environmental Data and Geographic Exchange initiative (EDGE) through which DEP strives to provide quick and easy access to timely, accurate and integrated environmental information on a geographic basis to DEP staff and constituents; and Quality Assurance and Quality Control through which DEP ensures that all those internally and externally who rely upon our data have access to sound, reliable information. (See Appendix A)

Strategic Planning Process

For the first time in 30 years, within the last two years DEP undertook a comprehensive organizational evaluation that identifies key issues and opportunities for the agency for addressing the environmental challenges in Connecticut in the 21st century. The purpose of the study was to evaluate through an open, objective process the current organizational culture and structure of the agency relative to its ability to effectively meet the agency's mission now and through the next decade. Overall, the evaluation process revealed that regardless of the organizational structure of the agency it is critical that the necessary cultural mechanisms are in place to ensure effective and efficient communication, coordination and healthy working relationships between and among all the various disciplines of the agency are fostered and maintained. One of the specific recommendations of the evaluation adopted by DEP was for the establishment of a strategic planning process framework to ensure an ongoing evaluation of how the agency manages its programs and resources and to provide a synergy to the strategic planning process.

Strategic Planning Process Framework

The strategic planning framework integrates the following three plans (see section 9 *Organizational Evaluation Draft Report*, May 2000, by Dr. Hugo Thomas for description): **Strategic Plan**; **Budget Plan** and **Operational Plan**.

- The **Strategic Plan** sets the overall priorities and associated goals and strategies. It is based on the long-term vision and mission of the Agency. It does not provide an exhaustive list of all the strategies to achieve the goals, nor does it provide a complete summary of accomplishments to date. The plan is designed to be concise and include only essential information to support the strategic goals. The intended audiences are the general public, specific constituent groups and the DEP staff.
- The **Budget Plan** sets forth the Budget for DEP and will be driven by the identified priorities and strategies of the Strategic Plan. It is based on actual expenditures from the previous year, appropriated funds for the current year and budgeted funds for the next two years. The intended audiences are the Commissioner, the Bureau of Financial & Support Services, and the Unit (Bureau/Office) producing the budget plan.
- The **Operational Plan** is the internal work plan that guides day-to-day operations in a prioritized fashion based on available resources from all sources for a given fiscal year. Work plans reflect the priorities of the Strategic Plan, various partnership agreements and the Budget Plan. The Operational Plan is based on the appropriation for the current year. The Operational Plan contains the most detail of the three plans, including a match-up of unit programs with budgets and percent time and their progress for a given fiscal year. The intended audiences are the Bureau/Office Managers, Supervisors and Staff.

As previously stated, the EQ Branch is engaging in a comprehensive strategic planning process. The first step is the development of this EQ Branch Strategic Plan followed by the development of corresponding budget and operational plans.

Public Participation

On October 10, 2001 as part of the agency's strategic planning process, a wide-variety of stakeholders, including members of the Bureau advisory committees, regulated community, environmental groups, academia and the public, were invited to participate in a discussion of the agency's strategic priorities. Over 70 representatives participated in a lively discussion on a wide-range of environmental and public health issues. The stakeholders were encouraged to submit comments on the draft EQ Branch Strategic

Plan. The discussion and comments provided for further refinement of the strategic priorities as well as informed the development of the EQ Branch Operational Plan. DEP plans to continue to communicate with a broad representation of stakeholders on its evaluation of its priorities and its progress in achieving them.

Environmental Quality Branch Strategic Priorities

ENVIRONMENTAL QUALITY BRANCH STRATEGIC PRIORITIES Fiscal Years 2002 - 2007

- **Air Quality Management**
- **Watershed Management**
- **Long Island Sound**
- **Conservation and Development Planning and Management**
- **Management of Toxic Pollutants**
- **Materials Management**
- **Emergency Response**
- **Managing Environmental Compliance**
- **Promoting Environmental Stewardship**

While some of the Strategic Priorities for the EQ Branch will remain the same over long periods e.g., watershed management and air quality management, others will likely change over time. The nine long-term Strategic Priorities identified above will be pursued through at least three state and federal budget cycles – fiscal years 2002 - 2007. Each priority includes a brief description of why it is a priority; a long-term strategic goal that describes a desired future condition of the environment that DEP is striving to achieve; objectives that address more specific conditions and generally take a shorter timeframe to achieve; and associated strategies that define how the goals and objectives are going to be accomplished or implemented. Each priority includes a strategy for the development of meaningful performance measures to demonstrate environmental and program performance and progress. DEP's continual evaluation of environmental trends through these measures will provide for dynamic analysis and modification of strategic priorities in the future.

Air Quality Management

Background: Despite countervailing trends in population, economic and transportation growth, Connecticut has achieved significant gains in improving air quality and in understanding the impacts of air pollution over the last thirty years. Since 1970, Connecticut has worked diligently to reduce emissions of criteria pollutants (carbon monoxide, lead, nitrogen dioxide, ozone, particulate matter and sulfur dioxide) and to reach attainment with the health-based National Ambient Air Quality Standards (*NAAQS*). Although Connecticut has not yet reached attainment for the ozone standard, concentrations of all criteria pollutants have been declining since monitoring began in 1973. Connecticut's success in reducing air pollution can be attributed to the implementation of a wide-variety of emission reduction strategies. These strategies have included requirements for stationary and area sources, and an effective permitting and enforcement strategy to assure compliance. Additionally, significant emission reductions can be attributed to strategies for motor vehicles. Today, the average new car is forty percent cleaner than the average new car manufactured in 1990 and more than 30 percent of the nation's gasoline is a cleaner burning blend designed to reduce emissions and health risks. Recently issued standards for diesel trucks, the continued implementation of the motor-vehicle emissions testing and maintenance program, and other innovative strategies that target reductions from mobile sources will help Connecticut achieve further reductions in air pollution.

These achievements are largely the result of a mix of strategies that include traditional regulatory approaches such as permitting and enforcement, voluntary measures such as compliance assistance and outreach, and market based incentives such as emission credit trading and state-EPA partnerships such as Connecticut's use of federal Clean Air Act provisions to enforce reduced emissions of the Midwestern power plants. The reductions in air pollution Connecticut has realized support the implementation of a diverse range of strategies and tools to achieve Clean Air, but much work lies ahead.

Despite Connecticut's great progress in achieving cleaner, healthier air, air pollution continues to be a widespread environmental and public health issue in Connecticut, as well as regionally, nationally and internationally, that presents a more difficult challenge because of countervailing trends in population, economic growth and transportation growth. Considerable progress has been made in Connecticut in reducing the level of ozone pollution. However, as we move towards implementation of the more stringent 8 hour standard, as opposed to the current one hour standard, we can expect to see ozone exceedances on the order of 25-30 days per year. On a national level, millions of Americans continue to be exposed to fine particulates at levels that are harmful to their health causing thousands of respiratory-related illnesses and thousands of premature deaths each year. Air pollution reduces visibility, damages forests and acidifies lakes and streams and Long Island Sound. Hazardous air pollutants, still an emerging area, pose an enormous challenge due to the need to establish a baseline of information, analyze the information to understand potential impacts to public health, and communicate that information in a coherent and effective way. In partnership with other DEP programs, stakeholders, and other agencies, a range of approaches (national, regional, and local) that are based on sound science will be developed, and will incorporate a range of tools including enforcement, permitting and compliance assistance and market-based approaches.

<p>Goal: Protect and enhance ambient air quality to make the air safer to breathe for all citizens and to reduce the impact of air pollution on other environmental media, resulting in many benefits, such as restoring damaged ecosystems and reducing health risks to those whose subsistence depends directly on those ecosystems.</p>

Objectives

- Maintain air quality gains to date and achieve further air quality improvements by continuing to set priorities through problem solving approaches and implement cost-effective solutions on the basis of improving health and reducing environmental risk.
- Continue to invest in information development and sound research to ensure a solid, defensible basis for decision-making.

Objective

- Maintain air quality gains to date and achieve further air quality improvements by continuing to set priorities through problem solving approaches and implement cost-effective solutions on the basis of improving health and reducing environmental risk.

Strategies

- a) Continue strong permitting and enforcement programs and streamline approaches for lesser sources.
- b) Continue to develop and implement control measures for stationary sources, including the development and implementation of a regional multi-pollutant reduction strategy for sulfur dioxide, nitrous oxides, carbon dioxide, and mercury. This will utilize the action plans endorsed by the New England Governors and Eastern Canadian Premiers for mercury, acid rain and climate change.
- c) Continue to pursue reductions of mobile source emissions by implementing vehicle-based solutions such as clean engine and clean fuel technology and continuation of the Inspection and Maintenance program. More specifically, DEP will continue efforts to seek a viable solution to a phase down of MTBE while preserving the air quality benefits achieved through the use of reformulated gasoline. DEP will also implement a coordinated emission reduction strategy for mobile source toxics with a particular emphasis on diesel emissions.
- d) DEP is committed to the development of an effective transportation network and coordinated state and local transportation planning. These efforts will be pursued through effective planning processes such as the Connecticut Environmental Policy Act (CEPA), coordinated planning and permitting procedures with DOT, and voluntary pollution prevention measures (see also *Conservation and Development Management and Planning* priority).
- e) Implement a problem solving approach to focus resources on opportunities to achieve voluntary reductions of toxics from Title V sources for all media. This effort will utilize air toxics and water quality monitoring data, and the Toxics Release Inventory (TRI) to establish a baseline. An education/communications strategy will be developed to provide information to the public and decision-makers on emission reductions and multimedia environmental and public health implications of such information.
- f) Build the necessary infrastructure needed to implement the more protective 8-hour ozone air pollutant standard and fine particulate matter standard.
- g) Continue to develop an effective strategy focused on electricity generation and energy usage that combines efforts to reduce emission transport from outside our region with reduction strategies targeting emissions generated within Connecticut.
- h) Continue to develop an effective energy strategy within New England and the Northeastern Canadian Provinces (the Region) to share interests in addressing energy reliability, environmental stewardship, transportation, air pollution transport, and climate change initiatives.

- i) Develop or identify meaningful performance measures to demonstrate environmental and program performance and progress for *Air Quality Management* priority.

Objective

- Continue to invest in information development and sound research to ensure a solid, defensible basis for decision-making.

Strategies

- a) Continue research efforts and investments to improve air quality and water quality monitoring networks needed to obtain better data and to further understand how particulate matter, air toxics, ozone, and nitrogen deposition impact health and environment. In particular, the research will examine the interrelationship between deposition of air borne pollutants in water.
- b) DEP will continue to support a long-term air toxics monitoring network to collect data on air toxic concentrations. This project will expand the information that is available on ambient air levels of toxic air pollutants so the impact, including potential risk, can be more accurately assessed.

Watershed Management

Background: Connecticut's water resources have improved dramatically since the passage of the State's Clean Water Act in 1967, as demonstrated by the improvement in the water quality of surface water bodies and the steady decline in permitted wetland alterations. These positive outcomes are largely due to the implementation of permitting and enforcement programs that address site-specific activities throughout the state. While this success is substantial, there remain many unresolved problems related to nonpoint source pollution from an array of routine human uses of land and water. Nonpoint source pollution results from urban and agricultural storm water runoff, construction site sedimentation, degraded aquatic habitat, failing septic systems, contaminated sediments, leachate from landfills and hazardous waste sites, and atmospheric deposition. In addition, many diversions of water have diminished natural stream flows needed to sustain healthy communities of fish and aquatic life.

Resolution of water resource issues related to nonpoint source pollution, while at the same time continuing to address point source pollution, will require greater emphasis on a watershed management approach involving various government, public and private interests within a given watershed. Watersheds are geographic areas defined by natural drainage divides that seldom coincide with jurisdictional boundaries such as town or state lines. They vary in size from drainage for backyard ponds to the 11,000 square miles that comprise the Connecticut River Watershed. Watershed management considers the resources and problems within a contiguous watershed, and involves the identification of priorities and opportunities within those areas to remediate or prevent pollution. Watershed management will require strengthened partnerships with watershed advocacy organizations, municipal programs, and other interest groups, and new ways of doing business.

To initiate watershed management planning, the DEP is preparing overview reports for each of Connecticut's seven major drainage basins. Each overview report will present current information about the land and water within the basin, using as a starting point the "Unified Watershed Assessments" prepared in cooperation with USDA Natural Resources Conservation Service in 1998. The overview report will summarize the status of attainment of adopted Water Quality Standards goals, and will highlight land management issues and water management issues that need to be addressed to restore and protect surface water and groundwater resources. The overview reports will provide a platform for the preparation of more detailed watershed management plans for the forty-four smaller regional drainage basins that make up the major drainage basins. Regional watershed plans will be developed with collaborative stakeholder participation as was done to produce the Norwalk and Mattabesset regional watershed plans.

Goal: Protect and restore the state's surface waters and groundwaters, and water-related resources and habitats; protect the public water supply and human health and safety; and preserve and enhance water-based recreation, propagation of fish and aquatic life.

Objective: Develop and implement a comprehensive watershed management approach that, in addition to controlling site-specific point source pollution, demonstrates a greater emphasis on control of nonpoint source pollution and related land use issues based upon watershed boundaries and restoration and maintenance of healthy aquatic habitats, emphasizing partnerships and local stewardship.

Strategies

- a) Implement, refine and strengthen DEP's statewide watershed management approach integrating relevant agency programs taking into consideration comments from advisory committees, watershed organizations and other interested parties.

- b) Continue strong permitting and enforcement programs to control or remediate sources of surface water and groundwater pollution and manage other natural resources related to water quality.
- c) Collect monitoring and stream gaging data to provide critical information for management decisions within the agency as well as for the agency's watershed partners.
- d) Protect and restore aquatic habitats, including wetlands, riparian areas, and fish and shellfish habitats.
- e) Enhance the protection of existing high quality ground water resources, including implementation of the Aquifer Protection Act, to improve protection of high yield water supply wellfields.
- f) Promote shared responsibility or stewardship for watershed protection and management by building both local and regional capacity and partnerships for watershed management.
- g) Develop a comprehensive water management assistance and outreach effort including training and education programs, guidance documents and use of the Internet.
- h) Improve public access to water resources.
- i) Develop a comprehensive water allocation system to protect and preserve the integrity of water resources while providing for public drinking water needs (see also *Conservation and Development Management and Planning* and *Emergency Response* priorities).
- j) Develop or identify meaningful performance measures to demonstrate environmental and program performance and progress for *Watershed Management* priority.

Long Island Sound

Background: It would be difficult to overstate the importance of Long Island Sound to Connecticut's environment, economy and quality of life. Over 15 million people live in the Sound's drainage basin, and many of them use the Sound directly for fishing, boating, or recreation, or indirectly as a source of seafood, a natural system of waste treatment, a transportation corridor, and ultimately, a touchstone of geographical and cultural identity. Few other estuaries on this continent can rival Long Island Sound's combination of natural resources, environmental significance, recreational and commercial value, and proximity to a vast and diverse population of users.

As the Sound and its shoreline become cleaner, more accessible and more attractive to a greater variety of users, it also comes under increasing pressure from development and use conflicts. Resource management and coastal regulatory issues such as sprawling coastal and watershed development; the increasing demand for public access, port development and dredging, management of dredged material, habitat protection and restoration and living marine resource management; controlling nonpoint source pollution; and managing conflicts among user groups all pose complex and multi-faceted challenges for the DEP. Indeed, Long Island Sound issues affect and are affected by most of DEP's programs, and there are many linkages and overlaps with other planning topics. Connecticut's Coastal Management Program, centered on the State's Coastal Management Act, is the framework through which the DEP coordinates comprehensive Sound-related issues.

At a more basic level, the uses and values associated with the Sound depend on the cleanliness and quality of the Sound's waters. In general, Connecticut's Clean Water Act with the assistance of the Environmental Protection Agency's National Estuaries Program provides the framework through which the DEP coordinates Sound-related water quality issues. More specifically, the DEP pursues its Long Island Sound water quality efforts under the aegis of the Long Island Sound Study (LISS), a cooperative effort joining the federal Environmental Protection Agency (EPA) and the states of Connecticut and New York. The LISS partners adopted the Long Island Sound Comprehensive Conservation and Management Plan (CCMP) in 1994. The CCMP identified seven problem areas of concern in LIS meriting special attention.

To address the particular LISS priority of hypoxia, the CCMP outlined a three-phased plan for reducing nitrogen loads to the Sound. The DEP has now entered into "Phase III Actions" with the goal of reducing the 1990 nitrogen load by 58.5% by 2014, which has been formalized with EPA's approval of the Long Island Sound Total Maximum Daily Load (TMDL) analysis on April 3, 2001. The CCMP also recommended development of a habitat restoration strategy. To date we have restored over 1,700 acres of tidal wetland and restored riverine migratory corridors at 33 sites. As with all Sound-related issues, the CCMP proposes state and local partnerships, coordination with diverse interests, and public outreach and education efforts.

Goal: To protect, restore, and enhance the environmental quality of Long Island Sound and its resources and to build capacity among all stakeholders to meet current and future challenges of resource and use management.

Objectives

- Improve the overall health and quality of Long Island Sound waters.
- Restore degraded coastal habitats.
- Improve control of nonpoint source pollution within the Sound's watershed and atmospheric sources from contributing areas.
- Improve public access to the Sound's shores and waters.
- Improve state and local capacity to plan for and manage coastal development on a sustainable, compact, and comprehensive basis.
- Support and sponsor research on issues affecting Long Island Sound management.
- Promote public education and outreach across all Sound-related issues to develop and mobilize a constituency for environmentally sound personal decision-making.

Objectives

- Improve the overall health and quality of Long Island Sound waters.
- Restore degraded coastal habitats.
- Improve control of nonpoint source pollution within the Sound's watershed and atmospheric sources from contributing areas.

Strategies

- a) Maintain existing partnerships with New York, the EPA, and others through the LISS Management Conference to implement the CCMP.
- b) Implement a Total Maximum Daily Load (TMDL) for nitrogen discharges into Long Island Sound and meet the 58.5% reduction necessary to achieve the state water quality standards for dissolved oxygen.
- c) Implement a Nitrogen Credit Exchange Program for Connecticut municipal sewage treatment plants that can help meet the nitrogen reduction target in the most cost-effective fashion.
- d) Work with air programs including out-of-state sources to ensure atmospheric sources of nitrogen and other acidifying compounds are reduced to levels protective of air and water quality.
- e) Implement a variety of nonpoint source and stormwater pollution control programs, including the 6217 coastal nonpoint program, Phase II stormwater permitting, the Clean Marina program, the Clean Vessel Act program; and pursue designation of No-Discharge Areas in appropriate embayments such as the Mystic River and Pawcatuck River.
- f) Implement the CCMP's Sound-wide 10-year restoration goal of 2000 acres of habitat and 100 river miles of riverine migratory habitat. In particular, continue to focus on our nationally recognized tidal wetland restoration program as well as riparian areas and fish and shellfish habitats. Continue to implement the cooperative statewide watershed management strategy.
- g) Continue to conduct appropriate and timely water quality monitoring of Long Island Sound waters to assist resource management decision making.
- h) Improve coastal regulatory compliance through outreach and education, enforcement initiatives, and changes in the permit fee structure.
- i) Work with EPA, the State of New York, the Army Corps of Engineers, port authorities, and other interests to ensure the environmentally sound management of dredging and dredged material.

Objectives

- Improve state and local capacity to plan for and manage coastal development on a sustainable, compact, and comprehensive basis.
- Improve public access to the Sound's shores and waters.

Strategies

- a) Prioritize and focus land acquisition efforts to acquire and manage priority lands for public access, recreational, and habitat protection values.
- b) Work with coastal cities to encourage a comprehensive planned approach to urban harbor development, focusing on water-dependent uses rather than individual large projects. Assist towns, particularly in lower

Connecticut River area, to develop harbor management plans and harbor guidelines that will address the cumulative impacts of docks and other waterfront development.

- c) Address emerging multiple use conflicts, including subaquatic cable crossings, aquaculture operations, high-speed ferry and freight operations, and increased port development.
- d) Implement a variety of coastal public access enhancement strategies.

Objective

- Support and sponsor research on issues affecting Long Island Sound management.

Strategies

- a) Manage impacts of coastal and watershed development through permitting and enforcement and assessment of cumulative and secondary impacts.
- b) Evaluate and address the impacts of sea level rise on shoreline erosion and coastal flood hazards.
- c) Focus research resources on management-related priorities such as invasive species, fish and shellfish population dynamics, submerged aquatic vegetation, and cumulative and secondary impacts.
- d) Study relationships between sources of nitrogen to Long Island Sound, including atmospheric deposition, and cultural eutrophication effects.

Objective

- Promote public education and outreach across all Sound-related issues to develop and mobilize a constituency for environmentally sound personal decision-making.

Strategies

- a) Continue public outreach and municipal partnerships drawing on university and government resources where appropriate, with an ultimate goal of establishing a National Estuarine Research Reserve in Connecticut.
- b) Work with the EDGE project to improve staff and public access to coastal resource, development, and regulatory information, particularly on the Web.
- c) Develop or identify meaningful performance measures to demonstrate environmental and program performance and progress for Long Island Sound priority.

Conservation and Development Planning and Management

Background: At the turn of the 21st Century, Connecticut is a desirable place to live, work and recreate. But can we sustain Connecticut's quality of life in the new millennium? Our strong economy shows that we know how to invest and manage financial capital, but in the Land of Steady Habits our habits of land use and development are steadily spending down our environmental capital, depleting the endowment of natural, historic, and cultural resources that make Connecticut distinctive. Today, we are consuming open land proportionally faster than our population is growing, and abandoning our historic social investments in urban centers. Our transportation system becomes less efficient as more cars and car trips overtake new roads, and transit options fail to keep pace. Sprawling growth shrinks habitat for plants and animals, bringing people into conflicts with wildlife and with competing uses for open space. Unless we can redirect existing patterns of economic growth and land development, the Connecticut we know today - vibrant town centers, traprock ridges and coastal vistas, abundant watercourses, rolling hills of forest and farmland, a living Long Island Sound - will be gone. The landscape we have inherited is the framework within which we balance environment, economy, and community to create our quality of life. If we want to sustain this balance, we must take aggressive steps now to conserve Connecticut's natural, historic, and cultural heritage.

As the time approaches in the five-year cycle to update the State of Connecticut's *Plan of Conservation and Development*, and as the need for refinement and enhancement of Connecticut's growth management system becomes increasingly more evident, the Connecticut Department of Environmental Protection (DEP) is cognizant of the pivotal role that this agency can and must play in shaping the future of Connecticut's landscape and the quality of life for its residents. To this end, DEP is committed to leveraging the authorities and resources of this DEP with those of other state and municipal agencies to develop and pursue a bold state vision for conservation and development.

Goal: To achieve a future for Connecticut that:

- Conserves and restores the natural environment and traditional rural and urban landscape.
- Restores and revitalizes the urban environment.
- Guides future growth in an efficient, cost effective, and sustainable manner fostering diverse, cohesive, walkable communities that respect and preserve their open lands and natural resources.
- Preserves Connecticut's rich fabric of cultural and historic resources.
- Promotes and maintains a vibrant and sustainable economy.
- Affords a high quality of life for all residents.

Objective: To focus and coordinate agency planning, funding, infrastructure, and regulatory programs with those of other state and municipal agencies in order to support and implement Connecticut's policies for conservation and development.

Strategies

- a) **Municipal Wastewater and Stormwater Infrastructure:** Continue the program to upgrade and expand municipal wastewater and stormwater conveyance and treatment systems and enhance nonpoint source pollution controls with an emphasis on enhancements that correct critical water quality problems and support Connecticut's conservation and development priorities as defined in the State *Plan of Conservation and Development*.
- b) **Water Resource Allocation:** Together with the Department of Public Health and the Department of Public Utility Control, continue to develop and implement a comprehensive water allocation and public water supply plan that recognizes the finite supply of protected public drinking water, provides sufficient streamflow to support healthy aquatic biota and promotes water conservation and the

expansion of water supply infrastructure to those areas of the state appropriately designated in the *State Plan of Conservation and Development*. (See also *Emergency Response* priority and *Watershed Management* priority)

- c) **Brownfields:** In cooperation with the Department of Economic and Community Development and the Department of Public Health, continue and expand Connecticut's program to remediate contaminated urban sites and foster the reuse and redevelopment of these lands; and inventory and prioritize sites for economic development and open space interests. (See also *Watershed Management* priority)
 - Assure that public funds are used in the most efficient manner to achieve remediation that is protective of human health and consistent with the State's environmental goals and to promote economic development of contaminated sites in a manner consistent with the *State Plan of Conservation and Development*.
 - Promote effective coordination and communication on remediation issues with the economic development community at the state, regional and local levels, the public health community and the general public.
 - Assist and encourage the private sector to voluntarily remediate contaminated sites through mechanisms such as the Licensed Environmental Professional Program, the property transfer program and the covenants not-to-sue provision.
- d) **Solid Waste:** Continue and expand Connecticut's comprehensive program to promote the reduction, reuse and recycling of waste materials and to provide state-of-the art waste handling and resource recovery infrastructure on a regional basis (See also *Materials Management* priority and *Watershed Management* priority).
- e) **Energy Policy and Planning:** In cooperation with the Office of Policy and Management, the Department of Public Utility Control, the Department of Transportation, the Department of Public Health, and the Department of Economic and Community Development, promote and support interagency efforts to develop a comprehensive energy policy for Connecticut that effectively ties together interrelated issues regarding energy supply and demand, transportation, air quality, natural resource protection, public health, and economic development and implement the New England Governors' Climate Change Action Plan (See also *Air Quality Management* priority).
- f) **Sustainable Practices:** As a state agency, lead-by-example in all aspects of our business operation to promote and encourage state and local government and the private sector to commit to "green" management practices which support the concept of "sustainable growth".
- g) **Coastal Management:** Continue and expand the agency's interdisciplinary efforts to effectively manage Connecticut's coastal environment by balancing multiple objectives of protection and restoration of coastal resources and habitats, promotion of public access and water-dependant uses, reduction of coastal hazards, promotion of sustainable growth and development, and revitalization of degraded urban waterfronts (See also *Long Island Sound* priority).
- h) **Land Acquisition and Open Space Protection:** Continue and expand Connecticut's aggressive program to acquire and protect a total of 21 percent of Connecticut's land area by the first quarter of the 21st century and continue to foster the development of viable greenway networks.
- i) **Outdoor Recreation:** Continue and accelerate the agency's program to restore and revitalize Connecticut's park and recreation infrastructure by the year 2010.
- j) **Natural Resource Protection and Restoration:** Continue and expand agency programs to protect and restore fish and wildlife habitat and promote natural resource diversity in Connecticut.
- k) **Environmental Review and Coordination:** Evaluate options for enhanced coordination of DEP regulatory programs and refinement of the Connecticut Environmental Policy Act (CEPA) intergovernmental environmental review process in support of statewide conservation and development

objectives. In particular, play an active role in the upcoming revision of the State of Connecticut's *Plan of Conservation and Development*.

- l) **Site Remediation:** Enhance remediation activities to achieve significant improvement in the quality of groundwater and surface water resources of the state adversely affected by site contamination. More specifically, as recommended in July 2000 *DEP Organizational Evaluation* by Dr. Hugo Thomas, evaluate mechanisms to coordinate remediation activities in a manner that enhances DEP's ability to address site contamination priorities that affect public or private drinking water supplies or otherwise poses a risk to the environment or public health in an effective and timely fashion. (See also *Watershed Management* priority).
- m) **Performance Measures:** Develop or identify meaningful performance measures to demonstrate environmental and program performance and progress for *Conservation and Development Planning and Management* priority.

Management of Toxic Pollutants

Background: Toxic pollutants are those that are known or suspected to cause cancer or other serious health effects, such as reproductive effects or birth defects, or to cause adverse environmental effects. Exposure to toxic pollutants can come from a variety of sources, and can occur from basic functions such as eating, drinking and breathing. The degree to which a toxic substance affects a person's health depends on many factors, including the quantity of substance the person is exposed to, the duration and frequency of exposures, the toxicity of the chemical, and the person's state of health and susceptibility. Once released, toxic pollutants can be carried by air or water away from their sources to other locations. A variety of factors such as weather, terrain and the chemical and physical properties of a pollutant determine how far it is transported, its concentration at various distances from the source, and whether it will degrade, become or remain airborne, or deposit to land or water.

Some toxic pollutants are of particular concern because they degrade very slowly or not at all, as in the case of metals such as mercury or lead or organic compounds such as polychlorinated biphenols (PCB's). These persistent bioaccumulative toxics (PBT's) remain in the environment and bioaccumulate in food chains and, thus, pose risks to human health and ecosystems. PBT pollutants pose particular challenges because they transfer rather easily to air, water, and land, and span boundaries of programs, geography, and generations. Repeated cycles of transport, deposition, and evaporation can move toxic contaminants very long distances.

Through stricter standards for water quality the DEP has made substantial progress towards eliminating the adverse impacts posed by toxic pollutants on aquatic life. Water quality criteria for heavy metals and other toxic pollutants have been incorporated in Connecticut's Water Quality Standards since the early 1990's. Discharge permit limits and monitoring requirements for toxic pollutants and general effluent toxicity have been established to protect aquatic life from the discharge of cooling water, treated industrial process wastewater, municipal sewage treatment plant effluent and regulated stormwater discharges.

The availability of information on toxics is critical for decision-makers as well as citizens in determining policy direction and preventative measures that should be taken. It has been a strategic priority of the DEP to develop a body of research to begin to understand the nature and extent of priority toxics within Connecticut. Mercury and methyl tertiary butyl ether (MTBE) are two priority contaminants that have been a focus for cross media research and reduction strategies.

Over the past ten years, the New England region has made considerable progress in reducing toxic emissions. Based on the Toxic Release Inventory (TRI) data reported under the Emergency Planning and Community Right to Know Act of 1986 (EPCRA), manufacturers reduced the releases of Clean Air Act air toxic emissions by 25,400 tons, a 73.6% decrease, between the years 1988 and 1997. This reduction was the result of a combination of government programs and industry initiatives, including the federal air toxics standards, state air toxics requirements, new emission standards for ozone-causing volatile organic compounds (VOCs), the voluntary 33/50 toxic pollutant reduction program, and promotion of pollution prevention efforts.

Goal: Reduce toxic emissions and discharges, through reduction strategies that include product stewardship, pollution prevention, emission controls and effective waste management.

Objective: Develop and to the extent possible implement a toxic pollutant reduction action plan integrating regionally consistent and transferable strategies.

Strategies

a) Identify priority compounds.

- Continue to conduct year-round air toxic pollutant monitoring in an effort to develop a comprehensive database on air toxic emissions that can be shared and utilized as the basis for Connecticut's reduction strategies. Utilize air toxic pollutant monitoring data, water quality monitoring data, and TRI to develop a pollution prevention pilot project focused on voluntary reductions in an environmental justice community (possible locations include: New Haven, Wallingford, Groton or New London).
- Continue to support a long-term comprehensive mercury/nitrogen monitoring and modeling program.
- Continue efforts with the Department of Public Health to establish a list of priority toxics.
- Reevaluate the list of prioritized toxic substances identified in the Pollution Prevention Plan.
- Continue dioxin monitoring efforts.

b) Identify sources of emissions and discharges, prioritize as short term, long term, and intermediate targets.

- Support the development and implementation of Multi-Pollutant regulations that link emission reductions to long term improvements to acid rain.
- Continue to support the adoption of product stewardship legislation. Promote source reduction and safe waste management including recycling by supporting regional labeling and source reduction initiatives.
- Continue to set emission and effluent limitations on toxic substances through permitting.
- Implement mercury reduction efforts through regulatory changes such as amending the hazardous waste regulations to incorporate the Universal Waste Rule and establishing limitations for mercury emissions from all municipal waste combustors, medical waste incinerators, sludge incinerators, industrial incinerators, utility and non-utility boilers.
- Continue public outreach and education efforts in conjunction with the Northeast Waste Management Officer's Association (NEWMOA), and other organizations. Distribute informational materials to increase consumer awareness of the dangers of mercury, non-toxic alternatives to mercury containing products and methods for safe management of mercury containing wastes.
- Continue mercury reduction efforts with hospitals and schools.

c) Identify additional reduction needs.

- Utilize findings in Northeast States for Coordinated Air Use Management's (NESCAUM) report published in September of 2000 entitled *Environmental Regulation and Technology Innovation: Controlling Mercury Emissions from Coal - Fired Boilers* to support the development of Congressional action for multi-pollutant legislation for power plants.
- Utilize data from three years of air toxics monitoring to identify reduction strategies.

- Utilize findings of the joint Northeast States for Coordinated Air Use Management (NESAUM)/New England Water Pollution Control Commission (NEIWPCC) Ethanol study to develop a plan for the phase down of MTBE and gradual phase in of ethanol while implementing additional measures for effective gasoline handling.

d) **Identify federal, state and regional responsibilities and opportunities.**

- Continue participation and support of the New England Governors and Eastern Canadian Premiers (NEG/ECP) Regional Mercury Task Force.
- Continue participation on the NESAUM/NEIWPCC fuels subcommittee.

e) **Identify short, intermediate and long-term control targets.**

- Quantify benefits of existing and planned control strategies.

f) **Develop or identify meaningful performance measures to demonstrate environmental and program performance and progress for the *Management of Toxic Pollutants* priority**

Materials Management

Background: Proper materials management can be an effective preventive and waste minimization strategy to protect valuable groundwater and surface water resources and air quality. Adverse impacts to the state's environment are routinely perceived to be the result of the mistreatment of wastes and waste materials. Extensive programs have been implemented to control such releases to our land, air and waters. A more hidden threat is the damage that can occur from the improper storage, handling, and usage of industrial raw materials, consumer products, and chemicals used by both the public and industry. In order to prevent environmental damage, standards for storage and usage of such materials have been established. Major efforts have been directed at the storage of petroleum products including gasoline and heating oils. Standards for underground gasoline storage tank systems are designed to protect groundwater and to control vapor releases to the air. Standards for marine terminal facilities for the bulk storage of petroleum products have been in place since the 1960's. Since 1967, Connecticut has worked diligently to protect the public and environment from the harmful effects of ionizing radiation. Over 400 sites including industrial facilities, educational institutions and medical/dental facilities that possess, use, or store radioactive materials are regulated.

Programs are also in place that regulate pesticides and fertilizers, polychlorinated byphenols (PCB's), and industrial chemicals. The DEP has provided education and outreach to promote the concept of integrated pesticide management. To protect valuable groundwater resources, air quality and reduce waste, techniques for the proper management and containment of household products and wastes are being implemented. Despite the promotion of pollution control such requirements will remain necessary.

Emerging materials management issues include the concept of product stewardship and the need to integrate the beneficial use of waste materials into our recycling programs. Product stewardship is the ultimate form of materials management where manufacturers take back worn-out and obsolete products for disassembly and reuse of the components. Having recognized this growing trend, many manufacturers are developing more environmental friendly products that generate less waste during their production and maintenance and are easier to recycle at the conclusion of their life cycle. In addition, manufacturers are recognizing their role in implementing the infrastructures necessary to collect and recycle worn out products. Examples include consumer batteries and thermostats.

These programs will be necessary to supplement the existing recycling programs implemented by municipalities for paper, glass, cans and other consumer products if the state is to achieve its goal of 40% source reduction and recycling.

The beneficial use of waste products such as sewage treatment sludges, resource recovery and coal ash, residuals from public water treatment facilities, industrial sludges, scrap tires and road sweepings can significantly reduce the need for solid waste processing and disposal facilities. Declining landfill capacity will necessitate that more emphasis be directed at the beneficial use of demolition and construction wastes and contaminated soils.

Goal: To minimize impacts to public health and the environment by promoting proper storage, handling and usage of materials and the minimization of waste disposal by the promotion of recycling and beneficial use of waste products.

Objective: To institute programs that promote product stewardship, recycling, beneficial use of wastes and the proper handling, storage and usage of materials.

Strategies

- a) Continue strong permitting and enforcement programs that ensure the proper management of Connecticut's solid and hazardous waste streams to protect public health and the environment.
- b) Promote the concept of product stewardship to minimize waste generation.
- c) Participate with stakeholders to develop a system for collection and re-use of consumer electronics.
- d) Incorporate household materials management into consumer education efforts (See also *Environmental Stewardship* priority).
- e) Promote the beneficial use of materials thereby reducing the need for waste processing and disposal facilities.
- f) Use the toxic materials inventory database to target industries that need to provide appropriate materials handling practices.
- g) Incorporate the benefits of proper industrial materials management into pollution prevention and waste minimization education and outreach.
- h) Continue to promote the concept of integrated pesticide management (See also *Environmental Stewardship* priority).
- i) Increase the emphasis for product stewardship, beneficial re-use of wastes and proper materials management in DEP's pollution prevention plan.
- j) Evaluate existing regulatory requirements to identify impediments to product stewardship efforts, recycling, and beneficial use, and implement program changes to encourage such concepts while continuing to protect the public health and environment.
- k) Develop standards for residential underground heating oil storage tank systems.
- l) Upgrade standards for marine and inland terminals that store and handle petroleum products including gasoline and heating oil.
- m) Continue and accelerate agency programs to reduce, remove and upgrade underground storage tank facilities due to their potential for contamination of soil and groundwater resources.
- n) Promote the elimination of the use of PCB's.
- o) Develop and implement updated radioactive material regulations including criteria applicable to all facilities proposing to terminate activities that utilize ionizing radiation to provide a single, consistent standard for clean-up.
- p) Implement the Multi-agency Radiation Survey and Site Investigation Manual methodology approved by the U.S. Department of Defense, U.S. Department of Energy, U.S. Environmental Protection Agency and U.S. Nuclear Regulatory Commission to assure that a consistent methodology is utilized to demonstrate that the above-referenced clean-up standard is met.
- q) Continue to monitor radiological decommissioning activities.
- r) Continue to monitor radioactive material transportation.
- s) Develop or identify meaningful performance measures to demonstrate environmental and program performance and progress for Materials Management.

Emergency Response

Background: The state's environment, and the public's health and safety can be severely impacted by the consequences of both natural and man-made disasters. Natural disasters such as fires, floods, and severe weather events can impact air and water quality, and endanger natural resources and public safety. The DEP has implemented proactive measures, such as watershed management and flood control programs, to minimize impacts and also developed emergency management strategies to respond to such events. Man-made emergencies may result from improper control of materials including petroleum and chemical products, wastes and radiological materials, fires and acts of terrorism, and air pollution emergency episodes that are a combination of natural weather conditions and permitted air emissions. The ability of the DEP to develop plans to minimize the impacts of this broad range of events varies significantly. Preparedness and response capabilities must remain a major focus. Emerging potential emergencies, such as foot and mouth disease, will require that new partnerships be formed to develop emergency response plans. The threat of terrorism will require the DEP to assume non-traditional roles to support other regulatory agencies at the local, state and national levels.

Goal: To minimize the impact on the environment, and public health and safety that may result from natural and manmade disasters.

Objective: Maintain and enhance DEP's emergency preparedness and response capability, identify emerging needs, and foster partnerships with local, state and federal providers.

Strategies*

- a) Continue to address emergency planning and response of appropriate facilities, installations and operations through permitting and enforcement efforts.
- b) Update contingency and emergency response plans for natural disasters and man-made emergencies.
- c) Promote training of response personnel.
- d) Maintain and upgrade physical resources and equipment including the automated flood alert system and emergency response and spill equipment.
- e) Network and develop strategic alliances with industry and local, state and federal authorities to identify threats and promote mutual response capabilities and coordination.
- f) Develop information systems to share response plans and technical information with agency staff and the public.
- g) Support state and multi-state response preparedness, response exercises and training events.
- h) Monitor the transportation of hazardous materials and radioactive materials (See also *Materials Management* priority).
- i) Exercise plans with local, state and federal responders.
- j) Update the state disaster debris plan.
- k) Provide technical assistance to the Office of Emergency Management's capacity to obtain and analyze information to predict natural disasters and warn the public of such potential events.
- l) Maintain DEP's Potable Water initiatives to assist in ensuring the safety and protection of Connecticut's drinking water.

m) Develop or identify meaningful performance measures to demonstrate environmental and program performance and progress for Emergency Response.

*See also radiation control and response related strategies under *Materials Management* priority.

Managing Environmental Compliance

Background: A combination of two disciplines, permitting and enforcement, has long been the standard approach employed by the DEP to carry out its primary mission of protecting public health and the environment from the harmful effects of pollution. Through the issuance of permits and other licenses, the DEP establishes the boundaries within which activities that have the potential to negatively impact the environment may be safely conducted. The DEP then monitors compliance with standards established in the permits. Where there is significant noncompliance with the terms of a permit or there is a failure to obtain a required permit, the DEP typically relies on its enforcement authorities to assure compliance. In its May 1997 Compliance Assurance Policy, the DEP recognized that conventional approaches to ensuring environmental compliance had “been augmented by cooperative efforts between the DEP and the regulated community”, and the DEP committed to further supplementing the traditional strategies by providing appropriate forms of assistance to those the DEP regulates. It is the effective integration of these three elements - permitting, assistance and enforcement that will provide the DEP with the greatest capacity to maximize protection of public health and the environment.

One way the DEP plans to integrate permitting, enforcement and assistance resources over the next two years is to use a “problem solving” approach. Environmental Problem Solving is an integrated process used to identify the causes of an environmental problem, considers the options available to solve it, establishes the measures that would indicate whether an intervention is successful, and pinpoints the resources which can be brought to bear to solve the problem. A problem solving approach will provide the DEP with the capacity to identify significant risks, problems, or patterns of non-compliance, to prioritize them, and to design solutions or remedies that eliminate or substantially mitigate those problems.

Goal: Maintain and further enhance environmental protection in Connecticut by using permitting, assistance and enforcement resources in an integrated manner to solve the environmental problems identified as priorities.

Objectives

- Promote continuous improvement of the environmental permit application review and decision-making process. Develop and implement appropriate tools to ensure the permits issued by DEP result in the desired environmental outcome and are fully understood by those that must comply with their requirements.
- Achieve the highest level of environmental compliance through predictable, timely and consistent enforcement and effective compliance assistance where appropriate. Identify and reduce significant non-compliance in high priority program areas, while maintaining a strong enforcement presence in all regulatory areas. Promote voluntary compliance within the regulated community where appropriate through education and outreach, incentives and compliance assistance.
- Improve communication with and provide a central source of information and access for business, industry, municipalities, and the public on the environmental regulatory process that assures compliance with environmental requirements.

Objective: Promote continuous improvement of the environmental permit application review and decision-making process. Develop and implement appropriate tools to ensure the permits issued by DEP result in the desired environmental outcome and are fully understood by those that must comply with their requirements.

Strategies

- a) Continue to refine the capacity in DEP permitting programs to assure that all permits issued by DEP are protective of the environment, clear, understandable and enforceable.

- b) Continue to assure that the permitting process is open and accessible to all stakeholders; effective and efficient; and results in clear, environmentally defensible decisions.
- c) Evaluate statistically valid baseline compliance rates for general permits and identify root causes of non-compliance with the terms and conditions of those permits and develop and employ compliance assistance, outreach and enforcement strategies directed at raising and maintaining compliance rates within the regulated communities covered under general permits.
- d) Investigate, in partnership with EPA Region 1, the incorporation of a multi-media approach to general permits. One or two industrial sectors will be evaluated for application of this comprehensive approach. Components of such an approach may include compilation of a holistic facility general permit, development of sector appropriate compliance assistance, reliance on self-certification and simple management systems, and regular auditing of a statistically appropriate cross section of the sector.
- e) Conduct pollution prevention awareness training for permit writers.
- f) Evaluate fully the cost of maintaining an integrated approach to environmental permitting and establish an appropriate fee structure.

Objective: Achieve the highest level of environmental compliance through predictable, timely and consistent enforcement and effective compliance assistance, where appropriate. Identify and reduce significant non-compliance in high priority program areas, while maintaining a strong enforcement presence in all regulatory areas. Promote voluntary compliance within the regulated community where appropriate through education and outreach, incentives and compliance assistance.

Strategies

- a) Continue to build capacity in DEP's enforcement programs to ensure compliance with the laws and regulations that protect human health and the environment.
- b) Tailor enforcement activities to advance DEP strategic priorities.
- c) Implement expedited enforcement approaches focused on isolated regulatory requirements (such as the Waste Bureau's ongoing underground storage tank systems compliance effort) to maximize the effectiveness of limited DEP resources.
- d) Comprehensively assess compliance rates for selected categories of general permits issued by the DEP. The assessment is to include determination of baseline compliance rates, identification of root causes of non-compliance, and development of compliance assistance and outreach strategies.
- e) Employ a problem solving approach to identify significant risks or patterns of non-compliance and then design and implement solutions to eliminate or substantially reduce non-compliance.
- f) Encourage the use of compliance-based environmental management systems, compliance assistance, and pollution prevention opportunities; support use of DEP's Incentives for Self-Policing Policy to promote voluntary compliance.
- g) Develop Supplemental Environmental Project ("SEP") business rules to ensure consistent application of the SEP policy and selection of the most beneficial environmental projects.
- h) Develop or identify meaningful performance measures to demonstrate environmental and program performance and progress for *Managing Environmental Compliance* priority.

Objective: Improve communication with and provide a central source of information and access for business, industry, municipalities, and the public on the environmental regulatory process that assures compliance with environmental requirements.

Strategies

- a) Continue to work closely with stakeholder and advisory committees in the air, waste and water programs to foster improved communications and customer service.
- b) Increase DEP's capacity to deliver assistance as part of an integrated approach to assuring compliance. The DEP will continue to collaborate with business and trade groups to provide information at major trade conferences and to co-sponsor workshops and seminars.
- c) Continue, through the Permits Assistance Office, to coordinate and provide permitting assistance appropriate to the needs of all permit applicants.
- d) Continue to work with environmental equity communities and other stakeholders to improve access to the environmental decision making process.
- e) Continue, through collaboration with DEP's Environmental Data and Geographic Exchange initiative and other state agency initiatives, a commitment to using computer technology and the Internet to improve interaction and delivery of information to all our constituencies.

Promoting Environmental Stewardship

Background: The assistance and innovation strategies outlined below support DEP's goal of maximizing environmental improvement beyond levels achieved with the more traditional tools, as previously discussed in *Managing Environmental Compliance* priority. Achieving optimal environmental performance requires going beyond basic regulatory control to include the decisions that each one of us make on a daily basis, whether personal or professional. Lifestyle choices, product design and product life-cycle considerations, the prevention of pollution, sustainability, and production methodology all influence the resulting environmental outcomes.

While all stakeholders are important, three essential groups must be addressed:

- **Individuals** need to understand the full impact that the personal choices they make have on our environment. Furthermore, a well-informed individual will be able to play a more meaningful role in the overall environmental decision-making process.
- The **regulated community**, at a minimum, must meet all of its baseline compliance obligations as outlined in *Managing Environmental Compliance* priority. Beyond that, a heightened understanding of the actual and potential impacts, as well as the opportunities for improvement, can lead to improved environmental performance and begin the shift toward sustainable business practices.
- **Regulators** must fully understand the effects of their decision-making on all stakeholders.

The DEP is committed to providing the appropriate assistance to achieving this outcome. Efficient and effective delivery of assistance will require further refinement of the audience. In addition to targeting the appropriate audience, these assistance and outreach activities must be aligned to the strategic goals and objectives of the DEP as prioritized in this strategic plan.

Goal: Improve environmental quality in the State of Connecticut by fostering communications between the DEP and *all* stakeholders; increasing access to information; and providing appropriate outreach and assistance.

Objectives

- Educate the members of the public on the full impact of their personal choices; and build the capacity to enable meaningful participation in the overall environmental decision-making process. Fully engage all public interest groups and increase DEP's response to the environmental needs of urban communities.
- Improve communication with the regulated community and provide a central source of information and access for business, industry, municipalities, and the public on improving environmental performance beyond basic regulatory compliance.
- Increase environmental awareness, and provide appropriate incentives and innovation to maximize environmental improvement. Promote pollution prevention and provide information and innovation to move all sectors toward sustainability.

Strategies

- a) Convene appropriate stakeholders to discuss how to best implement the development and delivery of environmental assistance and outreach recommended in the July 2000 *DEP Organization Evaluation* by Dr. Hugo Thomas.
- b) Increase the level of involvement and understanding of environmental stakeholders, such as conservation organizations and other groups representing the interests of the public.
- c) Create and deliver audience- appropriate curricula to promote superior environmental practices such as sustainability, pollution prevention, homeowner environmental stewardship, energy conservation and environmentally preferred purchasing.

- d) Analyze DEP's role under the Connecticut Environmental Policy Act and engage a broad-base stakeholder group in a discussion of potential improvements. (See also *Conservation and Development* priority, strategy k)
- e) Continue efforts to implement DEP's Pollution Prevention Plan as amended October 1999. Focus efforts on reducing toxics targeted in the strategies outlined in *Management of Toxics* priority.
- f) Continue to promote and expand community-based environmental protection through efforts such as DEP's Environmental Equity program and the Hartford Neighborhood Environmental Project. These efforts will provide neighborhood organizations with information about environmental issues and concerns with the goal of empowering the public to be able to affect change in their communities.
- g) Promote energy- efficient construction techniques and use of environmentally preferable materials through education of developers, contractors, architects and the construction industries. Participate in the CT Green Building Council and collaborate with other organizations to support educational forums.
- h) Act as a model for others by incorporating sustainable practices and principles into DEP's operations, (e.g., construct a "green" building at DEP's Hammonasset beach facility) (See also *Conservation and Development* priority, strategy f).
- i) Develop partnerships as needed to help in the delivery of assistance, (e.g., on-site assistance provided in cooperation with the Connecticut State Technology Extension Program).
- j) Develop a comprehensive library, readily available over the Internet, that provides all stakeholders with the technical, legal and policy information necessary to assure protection of the environment and effectively participate in DEP's decision-making process.
- k) Reduce energy consumption through expanded participation of CT companies in both Energy Star and NICE 3. (Energy Star encourages pollution prevention and efficient use of energy by companies through partnership, and the National Industrial Competitiveness through Energy, Environment, Economics (NICE3) provides grants that improve efficiency of manufacturing processes.)
- l) Identify and implement at least two unique innovation projects to make more efficient use of DEP and EPA resources while solving critical environmental needs. Negotiate agreements to allow for implementation using the Environmental Council of the States (ECOS) Innovation Agreement protocol.
- m) Develop or identify meaningful performance measures to demonstrate environmental and program performance and progress for *Promoting Environmental Stewardship* priority.
- n) Develop an automobile outreach and DMV pollution prevention project.

APPENDIX A

Environmental Equity

Background: Environmental Equity means that all people should be treated fairly under environmental laws regardless of race, ethnicity, culture, or economic status. The environmental equity movement emerged in response to both national and statewide evidence indicating that low income, racial and ethnic minority groups may bear a disproportionate burden of pollution. Such communities may experience higher than average exposures to, for example, air pollutants, lead contamination from deteriorated housing, waste treatment and disposal facilities, pesticides, and contaminated fish and soils. They may also have limited opportunities for meaningful access the Department's regulatory process as well as the state's natural resources.

The DEP Environmental Equity Program is one of the oldest environmental justice programs in the nation. Since its creation in 1993, the Department has developed a policy and strategies in response to the needs identified by local community groups, residents and the municipalities it serves. The Environmental Equity Program strives to ensure that minorities and historically excluded communities have meaningful access to the Department as well as to ensure a healthy environment and opportunities to enjoy natural resources are available in urban neighborhoods. The Department is committed to incorporating the principles of environmental equity into its program development and implementation, its policy making and its regulatory activities. One of the primary objectives of DEP's environmental equity program is to educate communities regarding their rights to ensure they have opportunities to participate in the Department's ongoing operations and program development, including but not limited to inclusion on the agency's advisory boards and commissions, regulatory review panels, and planning and permitting activities.

Goal: Ensure that no segment of the population because of its racial or economic makeup bears a disproportionate share of risks and consequences of environmental pollution or be denied equal access to environmental benefits.

Objectives: Facilitate response to environmental justice communities by appropriate authorities through improved communications within and between communities and the Department; ensure that the principles of environmental equity are well defined, understood by agency staff as well as the general public, and incorporated into all appropriate aspects of the Department's programs; and improve the public's understanding of environmental requirements, DEP actions and decision-making process and opportunities for meaningful public participation and access by minorities or historically under represented interests to the Department's regulatory process.

Environmental Data and Geographic Exchange Initiative

Background: DEP and its predecessors have been collecting information and data about the environment and the businesses and activities that affect it for more than 30 years. Current environmental systems reflect the history of environmental statutes, regulatory and funding requirements and program organization – they have been organized around individual medias and programs, and each system may have its own approach to defining sources, pollutants and compliance. Because programs view only a specific aspect of an overall facility (storage facility, treatment facility, pipe, stack) it is not surprising that the identification of such facilities/entities can differ widely from program to program, even in such basics as name and address. The issues are further compounded by the variety of systems utilized by conservation and resource management programs. As a result of the numerous forms and locations of information and significant data incompatibility, DEP lacks necessary and critical information and the ability to access it quickly and easily.

The nature and responsibilities in environmental management have also been changing. There is a growing emphasis on holistic, multi-media, location-based management and results-based approaches, and demand for greater public access. Couple these changes with a wave of new information technology – internet, GIS, hand held devices, and it is clear that DEP needs to rethink how environmental data is collected, used and shared. With increasing responsibilities and diminishing resources, activities need to be prioritized. DEP's current systems have limited ability to portray the contributions that Department's activities make to environmental improvement and efficiently respond to questions from external entities. The Department lacks the integrated information needed to detect trends, deploy resources, or view across medias relationships to pollution sources, their activities and resulting environmental consequence.

Environmental information must be viewed as a system not just a collection of separate recording and reporting processes. This view provides the basis for setting agency information goals and forces us to think differently about how we will support effective collection, storage and access to environmental data across an array of programs and users.

Goal: The Department's Environmental and Data and Geographic Exchange (EDGE) Initiative will renovate DEP's information management resources to better support the State and EPA mission of protecting the environment. The EDGE initiative will also improve and expand access to sound environmental information for internal and external customers, and assure that the procedures for obtaining, analyzing, storing and accessing data are as efficient and effective as possible. It is the Department's plan to move towards an integrated information management system that includes integrated access/integrated data; integration with geographic information; document management, workflow and automation capabilities and web delivery.

Objective: Provide quick and easy access to timely, accurate and integrated environmental information on a geographic basis to Department staff, partners and constituents. Users will have a comprehensive view of environmental activities, conditions and Department actions and have the capabilities to use the information to better protect and manage the environment. Providing more efficient tools will allow, for instance, the electronic submission of permit applications and periodic compliance monitoring or incident reporting.

Quality Assurance and Quality Control

Background: In our role of trustee of the environment and the state's natural resources, the public relies upon the Department's ability to assure in a transparent and understandable way that each decision made, standard set, permit limit established or remedial action plan approved is based upon credible, reliable data.

DEP recognizes the importance of ensuring the quality of Connecticut's environmental data through a holistic and systematic process. Strategic planning is the cornerstone for ensuring that necessary data or information are collected and that such data is in fact needed and of the expected quality for its desired use. Comprehensive strategic planning such as the *Environmental Quality Branch Strategic Plan* and the *Environmental Quality Branch Operational Plan* along with the *Environmental Data and Geographic Exchange Initiative* provide the necessary framework for the more specific environmental data operations systematic planning process.

Defining the primary responsibilities for managing and implementing each component of a quality system (e.g., type and quantity of data, quality assurance/quality control) is an essential element of the planning process along with assuring that personnel performing work for the agency have the necessary skills and training to effectively perform their work. Establishing appropriate controls for quality-related documents and records determined to be important to the mission of the agency is an important piece as well.

Goal: Ensure the integrity of Connecticut's environmental data through a holistic and systematic process. Ensure that all environmental data collected, generated and processed is scientifically valid; of known precision and accuracy; and of acceptable completeness, representativeness and comparability.

Objective: Continue to develop and implement guidance for Agency staff to maintain consistent and appropriate quality assurance, quality control and quality improvement operations for environmental data operations. The guidance will provide a consistent framework for continuous improvement.